

What is claimed is:

1. A vehicle headlamp system with headlamps, each of which contains a lamp unit within a lamp body for emitting beams forward with a predetermined luminous intensity distribution, comprising:

vehicle-to-vehicle distance measuring means for measuring the vehicle-to-vehicle distance between a first vehicle and a second preceding vehicle, and

variable luminous intensity control means for varying said luminous intensity distribution according to said vehicle-to-vehicle distance when the speed of the first vehicle exceeds a predetermined value.

2. A vehicle headlamp system as claimed in claim 1, wherein said variable luminous intensity control means fixes said luminous intensity distribution when the speed of the first vehicle stays at said predetermined value or lower.

3. A vehicle headlamp system as claimed in claim 1, wherein said luminous intensity distribution is a luminous intensity distribution having a cut-off line at an upper end, and wherein

said variable luminous intensity control means varies said luminous intensity distribution by vertically moving the position of said cut-off line.

4. A vehicle headlamp system as claimed in claim 3, wherein said variable luminous intensity control means fixes said cut-off line at a lowermost position while the speed of the first vehicle is kept at said predetermined value or lower.

5. A vehicle headlamp system as claimed in claim 1, wherein headlamps are provided on the left and right sides of a vehicle, thus forming a pair of headlamps and wherein said

vehicle-to-vehicle distance measuring means is contained in the lamp body of a first of the headlamps.

6. A vehicle headlamp system as claimed in claim 5, wherein a second of the headlamps includes an auxiliary lamp in a position that corresponds to the position of the vehicle-to-vehicle distance measuring means in the lamp body of the first headlamp.

7. A vehicle headlamp system as claimed in claim 6, wherein the second headlamp is located on the road shoulder side, and the auxiliary lamp irradiates the road shoulder portion of a road surface ahead of a vehicle.

8. A method for operating a vehicle headlamp system comprising:
measuring the distance between a first vehicle and a second preceding vehicle with a distance measuring means associated with a headlamp of the first vehicle; and
varying a luminous intensity distribution of each headlamp of the headlamp system according to the distance between the first and second vehicles when the speed of the first vehicle exceeds a predetermined value.

9. The method of claim 8 further comprising stabilizing the luminous intensity distribution when the speed of the first vehicle remains at or below the predetermined value.

10. The method of claim 8 wherein the luminous intensity distribution is varied by moving the position of a cut-off line.

11. The method of claim 10 wherein the luminous intensity distribution is fixed at a lowermost position when the speed of the first vehicle is kept at the predetermined value or lower.

12. The method of claim 8 further comprising illuminating a shoulder of a road with an auxiliary lamp associated with a second headlamp of the headlamp system.

Patented by the U.S. Patent and Trademark Office